

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An apparatus for database synchronization in a network ~~element management system comprising:~~

at least one or more network elements which compare block units of information in a common memory storing current status information and information in a sync-related memory storing previous status information, the at least one or more network elements transmitting data results of the comparison; and

a network element management system which stores the data results of the comparison transmitted from the network elements for thereby monitoring and managing the network elements in real time.

2. (Previously Presented) The apparatus of claim 1, wherein, in said at least one or more network elements, said common memory and said sync-related memory are connected to each other for thereby periodically comparing information within both memories.

3. (Previously Presented) The apparatus of claim 1, wherein each of said at least one or more network elements includes a separate database.

4. (Previously Presented) The apparatus of claim 1, wherein said network element management system has a sync-related memory for storing changes in memory based on the comparison between the common memory and the sync-related memory of said at least one or more network elements.

5. (Currently Amended) The apparatus of claim [[1]] 4, wherein said network element management system has a common memory which is connected with said sync-related memory of the network element management system to thereby store current network status information transmitted as the data results.

6. (Currently Amended) The apparatus of claim [[1]] 4, wherein said network element management system includes a database separate from the sync-related memory and the common memory of the network element management system.

7. (Canceled)

8. (Currently Amended) In a ~~network element management system~~ which is provided with at least one or more network elements, a method for database synchronization in ~~a the network element management system~~ comprising the steps of:

comparing block units of information in a common memory which reflects database information of said network elements with block units of information in a sync-related memory which stores data prior to a certain period;

transmitting only modified block data, as a result of said comparison, to said network element management system; and

storing said transmitted data in the memory of the network element management system.

9. (Previously Presented) The method of claim 8, wherein said step of comparing the information in the two memories in block units includes an initialization step in which initial values of the memories are set according to database information and alarm information, and waiting for a synchronization request.

10. (Previously Presented) The method of claim 9, wherein said initialization step includes:

a step in which at least one or more network elements initialize a common memory according to their database information and alarm information;

a step of initializing said common memory and the sync-related memory at a same time; and

a step of waiting for a SYNC_REQ signal from said network element management system.

11. (Previously Presented) The method of claim 9, wherein said step of transmitting said modified data to said network element management system includes:

a step of transmitting a position and data of a corresponding block when data in said common memory and data in said sync-related memory are not identical;

a step of copying the corresponding block of the common memory into the corresponding block of the sync-related memory; and

a step of comparing a next block again when said both data are identical.

12. (Previously Presented) The method of claim 11, wherein said step of transmitting said modified data to said network element management system further includes a step of not copying the corresponding block of the common memory into the corresponding block of the sync-related memory, in the case that a transmission of the modified data to the network element management system has failed.

13. (Canceled)

14. (Previously Presented) The method of claim 8, wherein said step of comparing block units of said two memories further includes:

a step of transmitting a last block of said network elements to said network element management system, in the case that there is no change in blocks.

15. (Currently Amended) The method of claim 8, wherein said step of comparing block units of said ~~two memories further common memory and the sync-related memory~~ includes:

a resynchronization step of setting initial values of the memories according to said database information and said alarm information, and synchronizing said values, in the case that said network element management system continues not receiving signals from said network elements more than a certain number of times for a certain period (T).

16. (Previously Presented) The method of claim 15, wherein said resynchronization step includes:

a step of passing to a manual synchronization step in order not to impose a load on the corresponding link, in the case that the resynchronization step is proceeded for a certain time, but synchronization is not established.

17. (Previously Presented) The method of claim 15, wherein said resynchronization step includes:

a step of waiting for a resynchronization signal from said network element management system, in the case that a link error is recovered;

a step of comparing both data in said common memory and said sync-related memory when said resynchronization signal is received; and

a step of transmitting changes occurred during said link error to the network element management.

18. (Previously Presented) The method of claim 16, wherein said manual synchronization step includes:

a step of transmitting sync-related data to said network element management system, when a link error recovery is confirmed by a network operator.

a step of passing to said periodical reporting step; and

a step of maintaining a current manual state, when said link error recovery is not confirmed.

19. (Currently Amended) The apparatus of claim 1, wherein the network element management system stores the data results so as to synchronize data between the network element management system and the at least one or more network elements.

20. (Currently Amended) The method of claim 8, wherein the network element management system stores the data so as to synchronize data between the network element management system and the at least one or more network elements.

21. (Currently Amended) A data synchronization method comprising:
comparing blocks of information in a common memory of a network element with
blocks of information in a sync-related memory of the network element;
transmitting data from the network element to a management system based on the
comparison; and
storing the transmitted information in the management system.
22. (Previously Presented) The method of claim 21, wherein transmitting the data
involves transmitted modified information of the blocks of data.
23. (Previously Presented) The method of claim 21, further comprising providing
initial values to the common memory and the sync-related memory.
24. (Previously Presented) The method of claim 21, wherein transmitting the data
includes transmitting a position and data block of information stored in the management system.
25. (Canceled)